

## XP-002248414

AN - 1998-163702 [15]

AP - JP19960184322 19960715

CPY - TOXW

DC - A14 A81 A82 A97 G02

DR - 0271-U 0426-U

FS - CPI

IC - C08F2/00 ; C08F220/18 ; C08F220/28 ; C08F290/06 ; C09C3/10 ; C09D17/00

MC - A04-F06A A04-F06E A10-B01 A12-W12C G02-A03 G02-A04A G03-B02 G04-B02

PA - (TOXW ) TOYO INK MFG CO LTD

PN - JP10030010 A 19980203 DW199815 C08F220/18 008pp

PR - JP19960184322 19960715

XA - C1998-052868

XIC - C08F-002/00 ; C08F-220/18 ; C08F-220/28 ; C08F-290/06 ; C09C-003/10 ;  
C09D-017/00

AB - J10030010 Prepn. of a nonionic polymer surfactant having number average molecular wt.(Mn) of 10,000-2,000,000, comprises copolymerising 70-10 wt. % of (A) monomer of formula (I), 30-90 wt. % of (B) monomer of formula (II) and 0-50 wt. % of (C) vinyl monomer other than (A) and (B). At the initial polymerisation stage, the amount of the monomers charged is 20-80 wt. %, based on the total amount of the monomers. When the conversion rate of the copolymer reaches 5-50 %, the residual amount of monomers were added and the reaction mixture is copolymerised under the following condition (i), (ii) or (iii): (i) when a ratio of the amount of (A)/(B) at the initial stage is K1 and a ratio of (A)/(B) at the additional stage is K2, K1 and K2 are not the same; (ii) the amount of (B) is zero at the initial charging stage; or (iii) the amount of (B) is zero at the additional stage.  $\text{CH}_2=\text{C}(\text{R}_1)\text{COO}-\text{R}_2$  (I)  $\text{CH}_2=\text{C}(\text{R}_1)\text{COO}(\text{C}_n\text{H}_{2n}\text{O})_m\text{R}_3$  (II)  $\text{R}_1 = \text{H}$  or  $\text{CH}_3$ ;  $\text{R}_2 = 4-22\text{C alkyl}$ ;  $\text{R}_3 = \text{H}$  or  $1-4\text{C alkyl}$ ;  $n = 1-3$ ; and  $m = 4-25$ .  
- Also claimed is the nonionic polymer surfactant prepared by the method defined above.

- USE - The surfactant is suitable for film-forming material, e.g., coatings, ink, adhesives, filler, moulding material, surface-modifying material, etc.

- ADVANTAGE - The surfactant has higher surface activity than the conventional surfactant and has good pigment dispersing properties. When the surfactant is utilised, solvent is not required. When the surfactant is used in a baking coating, it improves the water-resistance of the surface of the coatings after baking.

- (Dwg.0/0)

IW - NONIONIC POLYMER SURFACTANT COATING INK ADHESIVE PREPARATION ACRYLATE METHACRYLATE MONOMER OPTION VINYL COMONOMER

IKW - NONIONIC POLYMER SURFACTANT COATING INK ADHESIVE PREPARATION ACRYLATE METHACRYLATE MONOMER OPTION VINYL COMONOMER

NC - 001

OPD - 1996-07-15

ORD - 1998-02-03

PAW - (TOXW ) TOYO INK MFG CO LTD

TI - Nonionic polymer surfactant used e.g. in coatings, inks and adhesives  
- prepared from acrylate or methacrylate monomers and optionally vinyl comonomers

A01 - [001] 018 ; G0339-R G0260 G0022 D01 D12 D10 D26 D51 D53 D63 F41 F89  
 G0340-R G0339 D58 G0384-R ; R24019 G0384 G0339 G0260 G0022 D01 D11  
 D10 D12 D26 D51 D53 D58 D63 D93 F41 F89 ; G0339-R G0260 G0022 D01 D12  
 D10 D26 D51 D53 D63 F41 F89 G0362-R G0340 G0339 D11 D58 F26 F27 G0373  
 G0408-R G0384 G0419 D50 D87 D88 D89 D90 D91 D92 D93 D94 D95 F34 F90  
 H0204 ; H0022 H0011 ; L9999 L2528 L2506 ; K9723 ; A999 A566-R ;  
 A999 A782 ; P0088 ;  
 - [002] 018 ; ND01 ; ND03 ; Q9999 Q9110 ; B9999 B5094 B4977 B4740 ;  
 Q9999 Q7114-R ; Q9999 Q8797 Q8775 ; Q9999 Q6644-R ; B9999 B4706-R  
 B4568 ; K9325 ;  
 - [003] 018 ; R00426 D01 D11 D10 D50 D88 F12 F13 ; C999 C088-R C000 ;  
 C999 C293 ;  
 A02 - [001] 018 ; D01 D11 D10 D50 D81 D82 D83 F34 ; H0000 ; H0237-R ;  
 P0055 ; P0975-R P0964 F34 D01 D10 ; M9999 M2017 ; M9999 M2153-R ;  
 M9999 M2186 ; M9999 M2813 ; L9999 L2506-R ; A999 A782 ; A999  
 A566-R ;  
 - [002] 018 ; ND01 ; ND03 ; Q9999 Q9110 ; B9999 B5094 B4977 B4740 ;  
 Q9999 Q7114-R ; Q9999 Q8797 Q8775 ; Q9999 Q6644-R ; B9999 B4706-R  
 B4568 ; K9325 ;  
 A03 - [001] 018 ; S9999 S1434 ; P0000 ;  
 - [002] 018 ; ND01 ; ND03 ; Q9999 Q9110 ; B9999 B5094 B4977 B4740 ;  
 Q9999 Q7114-R ; Q9999 Q8797 Q8775 ; Q9999 Q6644-R ; B9999 B4706-R  
 B4568 ; K9325 ;  
 - [003] 018 ; A999 A566-R ;